G R S 59]

GENERAL AND REVENUE SECRETARIAT

P 53

1908

(Municipal)

File No. 132—08

Serial Nos. 3—4

Papers Filed.

Month Dec. 1908

SUBJECT

Loan to the Srenger.

PREVIOUS REFERENCES

274—07 1—)

LATER REFERENCES

1908

GENERAL AND REVENUE SECRETARIAT

(Imuafs)

NOTES

4152

File. No 132-08

FILE HEADING

Loan to the Singara Imuafs

The Chief Engineer.

No 7965 Dated 16-12-08 Received 16-12-08

y No 4402 | Enclos. 2 Spare Copies | Serial No 3

BRIEF ABSTRACT OF LETTER.

Submits with refce to para 3 offg. Sec.'s No 1692-7/Genl 9-09-78 18-8-08 two copies of the sanctioned revised estimate for sanitary improvements to the town of Singara for record in the Secl & and in the office of the Secl, Singara Imuafs

NOTES AND ORDERS

One copy may be kept in the office file and the other sent to the President, Singara Imuafs through Dy. Comr, Mysore &c.

Draft submitted

Issue

26-12-08

Notes—First sheet.

GPB—30,000—20-3-06

d Revenue
at

File No 132 of 190 8

Serial No 4

To the Pres^dt, Sringeri Municipality through the Deputy Comm^r, Kadur District No 6137/31 12 08

Forwards a copy of the revised estimate of the probable cost of constructing storm water drains and effecting other improvements in the Sringeri Municipality, for record in his

GPB—50,000—17 3 07

No 7945

MYSORE P W DEPARTMENT

CENTRAL OFFICE,

Bangalore, 14th December 1908

From

W McHUTCHIN, ESQ, MICE,

Chief Engineer of Mysore

Bangalore

To

K S Chandrasekara Iyer Esquire, B A, B L,

Secretary to the Government of

His Highness the Maharaja of Mysore,

General and Revenue Departments

SIR,

With reference to Government Proceedings No 1692-7/M1 279-07-7 dated 18th August 1908, sanctioning a revised estimate amounting to Rs 13,168/- for improving the sanitation of the town of Sringeri, I have the honor to forward, as required by para 3 thereof, two copies of the sanctioned revised estimate for record in the office of the President of the Sringeri Municipality and the Revenue and General Secretariat

2 The Superintending Engineer, Western Circle, inspected the work already carried out on the 24th ultimo, and his report will be forwarded to Government on receipt

I have the honor to be,

Sir,

Your most obedient servant,

For Deputy Chief Engineer

of Mysore

CPB—2 CO—2190

A3 389

4 63 x 14 x ½ 16732

Down Copy

190

MYSORE P W DEPARTMENT

No 7946-

From

THE CHIEF ENGINEER OF MYSORE,
Bangalore

To

Dated Bangalore

Despatched

Enclosure No 2

SUBJECT

Ramanathapuram Kadur Division

Revised Estimate of the probable cost of constructing
surface drains and other Sanitary improvements
ovements in Srimangalam Town Koppa Taluk

Details of work	Nos.	Dimensions			Contents	Total
ning out side drains to um roads						
e-work Excavation						
From Mutt to Town Gate	1	~~2374~~ ft				
Harihar Dewan Street	1	797½				
do do do	1	209				
do do do	1	227				
do do do	1	206				
Arekal Street	1	367				
do do do	1	412				
Mylar Dewan Street	1	540				
Road from Petta to Malikaryuna	"	"				
Temple Street	1	250				
do do do	1	412				
Gwerkan Street	1	400				
do do do	1	300				
do do do	1	300				
Total		6694½				
For both Sides	2 ×	6694½				13389

Sundry charges, such as engageing coolies for opening foot-paths &c as per C Register					Lump Sum Rs 771
Opening side drain for and from minor roads to Paddy fields and river					
Earth-work Excavation					
Main Street channel					
from Tunnel no. 2	1	28 2/3	3 2/3	1/3	35
do no 3	1	42	3 1/2	1/2	73
do no 6	1	22	2	1	44
do no. 9	1	11 1/3	1 1/2 + 1 1/2	1/3	19
Harihar devar Street					
do no 2	2	16	1/2	1	16
do do do	1	16	2	1/3	11
do no 3	1	26	2 1/2	1 3/4	114
do no 4	1	9	1+1	1/3	32
do do	1	12 1/3	1+2	1 2/3	3
Arakal Street no 1	1	14 1/3	2	1 2/3	28
do no 2	1	24 2/3	2 5/12	2 5/6	169
Filling earth over					
Box drain	2	10	2	1/4	10
Side-drain. Harihar					
Devar Street Right	1	136	1+1 1/2	1/2	85
do Left	1	184	1+1 1/2	1/2	69
Mylar devar Street	1	48	2		96
Total Cubic yds.					
Rough Stone-work new					
Channel bed					
flooring	1	42	3	0 1/2	63
Revetting sides	2	42	3/4	1/2	31
Leading channel					
from Tunnel no 3					
Flooring bed of channel	1	34	3	1/2	51

Brought forward				6	1645
Revetting sides	2	34	$\frac{3}{4}$	$\frac{2}{3}$	34
Tunnel No 6 Platform	1	22	$2\frac{1}{6}$	$\frac{1}{8}$	16
Revetting sides	2	$22\frac{3}{8}+\frac{1}{2}$ / 2		$1\frac{1}{2}$	36
Splay Wings	1	$\frac{1}{2}$	$\frac{1}{2}$	$1\frac{1}{4}$	$\frac{1}{3}$
do	1	$\frac{1}{2}$	$\frac{1}{2}$	1	$\frac{1}{4}$
ihar dewar Street					
From tunnel no 2					
Platform	1	16	$\frac{11}{6}$	$\frac{1}{3}$	10
Retting Sides	2	16	$\frac{7}{12}$	$1\frac{1}{4}$	23
apron Toe-wall	2	1	$\frac{1}{2}$	$\frac{5}{6}$	1
Tunnel no 3 Platform	1	$25\frac{2}{3}$	$\frac{11}{6}$	$\frac{1}{3}$	16
Revetting Sides	2	$25\frac{2}{3}$	$\frac{7}{12}$	$1\frac{1}{4}$	37
ab Street-Tunnel no 1					
Platform 1st Coating	2	$12\frac{1}{3}$	$\frac{2}{3}+\frac{1}{2}$ / 2	$1\frac{2}{3}$	24
do do do	2	$1\frac{2}{3}$	$\frac{2}{3}+\frac{1}{2}$ / 2	$\frac{2}{3}+\frac{1}{2}$ / 2	3
do do	2	$\frac{3}{4}+\frac{1}{2}$ / 2		1	1
Tunnel no 2 Platform	1	$25\frac{1}{3}$	$1\frac{3}{4}$	$\frac{1}{3}$	15
Side-walls	1	$24\frac{2}{3}$	$\frac{2}{3}+\frac{1}{2}$ / 2	$1\frac{3}{4}$	25
do do	1	$25\frac{1}{3}$	$\frac{2}{3}+\frac{1}{2}$ / 2	$1\frac{3}{4}$	26
ardevar Street					
Tunnel no 2	1	$2\frac{2}{3}$	$\frac{2}{3}$	$\frac{1}{3}$	1
Side-walls	1	$1\frac{1}{3}$	$\frac{1}{2}$	1	1
do	1	$\frac{2}{3}$	$\frac{2}{3}$	$\frac{2}{3}$	"
do	1	$2\frac{1}{3}$	$\frac{1}{2}$	$\frac{2}{3}$	1
do	1	$3\frac{1}{3}$	$\frac{1}{3}$	$\frac{2}{3}$	1
do do do	1	$\frac{2}{3}$	$\frac{1}{3}$	$\frac{2}{3}$	"
Tunnel no 1 Platform					
for Box drain to					
headout water	1	40	2	$\frac{1}{3}$	27
Side-walls	2	40	$1\frac{1}{2}$	$1\frac{1}{3}$	160
Total cubic yds				608 $\frac{1}{2}$	603 $\frac{1}{2}$
pensation paid for the acquired lands.				Rs.	125

Burnt Stone Slabs. well dressed						
Covering Slab over						
Main Street bottling						
leading rough Stone tunnels						
No. 2	1	126	5 1/2	(1/2)	693	
over Splay wings	2	9	1 1/2	(1/2)	27	
do No. 3	1	86	4 1/2	"	382	
do do	1	14	6	"	84	
do do	1	5 1/3	1 3/4	"	9	
do old slab	1	6	6	"	36	
Harichandra Street tunnels						
No. 3	1	75	6	"	450	
do	1	2 1/2	3	"	7	
do	1	2 1/2	6	"	15	
Arekal Street Tunnels No. 1	1	42	5	"	210	
do	1	74	6	"	444	
Total cubic feet.					2357	2357
Sundry charges. Opening side drain	Lump Sum Rs 1					
Clearing old house Site			do		2	
Removing Steps Stones in front of houses			do		3	
Jelly filling as per measurement book.			do.		8	
Total Rupees						
Opening new roads marked a. b. C & d. Compensation for land	1 Rupee					
Sundry charges, such as demanding old walls of houses cutting trees and jungle clearing as per measurement book.	Lump Sum Rupees					

E.	work excavation			
	Cutting and lowering		6	
	the road as per			
	Measurement work		C yds.	2370
Ter	ing, felling and forming,			
the	vailable earth for adjacent			
ro	s, including carting as per			
	actual excavation		C yds.	1500
Fe	elling the road including			
k	k for the opening above road		C yds.	90
Op	ng out catch drains as			
	per Measurement book		C yds.	1277
R	ning the road marked			
	E. F in the plan			
C	ensation for the acquired			
7	lands	Lump Sum	Rs	Nil

Abstract

Items of work	Per	Rate			Quantities	
Opening out side drain to main roads Earth-work Excavation	c.yd.	"	2	6	167 5/8	262
Compensation for the acquired lands	Lump	Sum			Rupees	75
Sundry charges Such as engaging coolies, opening out foot-paths &c	Lump	Sum			Rupees	77
Total						
Opening out side drains for and from main roads to Paddy fields and rivers						
Earth-work Excavation	c.yd.	"	2	6	774	121
Rough Stone work dry	c.yd.	2	8	"	608 1/2	1509
Compensation paid for the acquired lands	Lump	Sum			Rupees	25
Sundry charges Such as jelly packing to sides of leading channel and dismantling old house	Lump	Sum			Rupees	14
Burnt stone Slabs 6" thick	S.ft.	"	8	"	2357	1179
Total						
Opening new road marked a b c d in plan						
Compensation for the acquired Lands to define road width	Lump	Sum			Rupees	400
Sundry charges Such as dismantling old walls of house Cutting trees and removing jungle as per measurement book						30
Earth-work Excavation	c.yd.	"	2	6	2.370	"

...ng, filling and forming						8	
...ove available earth.							
...djacent roads including							
...ng	Cyl	"	"	9	1500	70	
...elling the roadway	Cyl	1	"	"	90	90	
Total							964
...g Catch drain.							
...k work Excavation	Cyl	"	2	6	1277	200	
Total							200
...ng road Macked & Tarplan							Nil
Total Rupees							4526.

...ed) Harry T Molloy
Executive Engineer,
Kadur Division,
Chikmagalur.

(Signed) B. Gavudachar...
Assistant Engineer
Kopp...

Constructing 5' Rough Stone tunnels					
of 2 Vent 3' x 3'					
Tunnel No 1 A in Main Street					
Earth-work Excavation opening out					
Road and also excavating foundation	1	16	4	2	128
do	1	2	2	2	8
Total C yds.					136
Deduction Portion of old tunnel					
Vent	1	16	1	1	16
Side Rough Stone walls of old tunnel	2	16	1	1	32
Thickness earth portion of covering Slab					
of tunnel	1	16	1½	1/6	4
Total c. yds					52
Balance in Cubic yards.					84
Rough Stone in Mortar Foundation					
Abutments	2	47½	2	1 5/6	348
do Wing	1	5	2	1 5/6	18
do	1	6	2	1 5/6	22
Piers	1	28½	2	½	29
Retaining walls in front for					
flooring of tunnel	2	2½	1½	1½	11
Superstructure Abutments	2	47½	1½	2½	356
Piers	1	28	1½	2½	106
Abutment wings	1	5	1½	2½	19
do	1	6	1½	2½	23
Coursing over old tunnel walls in Cut	1	7	1½	2½	26
Wheel guard	1	23	2	1	46
Backing to Covering Slab over Abutment	2	47½	¾	½	36
Total cubic feet					

-t Stone Slab dressed						
wearing slab over tunnel	1	18½	4½	2	41	
do	1	31	9	½	139	
t g Slab over parapet wall.	1	23	1½	½	17	
gle Slab under parapet for Coured	1	6	1½	½	5	
C ed Slab between abutments and						
pier	1	6	1½	1	9	
Total Cubic feet						211
B t Stone Size in mortar						
Parapet wall	1	23	1½	1	35	
Total cubic feet						35
inting with lime mortar						
Face of abutments inside	2	49½	"	2½	247	
Pier around	1	59	"	2½	147	
Masonry wings	1	6	"	2½	15	
Wheel guard	1	23	"	1	23	
Parapet wall around	1	49	"	1	49	
Total Sqr						4.081
l Stone flooring with flat stone						
Vent flooring	1	15½	5/6	½	6	
The other Vent	1	10	5/6	½	4	
side of pier in rear side	1	1	½	½	1	
Front Cistern flooring	1	6	3	½	9	
Total Cubic yards						20
re Stone-work dry						
Front Cistern Side walls	2	3	2	4½	54	
Circular revetment in front of						
tunnel	1	12	1½	4½	81	
Total cubic feet					135	
Total Cubic Yards						5

Metalling over tunnel	1	12	8	½	48	
Total cubic feet					48	
Total cubic yards						2
Dismantling old rough Stone work						
Abutments of old tunnel	2	48	3	3	864	
Total cubic feet						864
Removing old covering slab.	1	48	4½	"	216	
Total cubic feet						216
Removing available earth out of Town.						
As per deduction in earth-work						
Excavation item	Lumps	Sum	Cubic yds.			84
Providing guard Stone					Nos	3
Tunneling 2 A in main street						
Earth-work Excavation.						
Cutting and opening road	1	10	4	2	80	
Excavating foundation	3	11	⅔	½	11	
Total Cubic yds.					91	91
Rough Stone in Mortar						
Abutment and Piers	3	33	2	1½	297	
Retaining wall for floor of tunnel	4	2½	1½	1½	22.	
Superstructure Abutments and Piers	3	32½	1½	3	439	
Backing to Covering slab.	2	32½	¾	½	24	
Cistern for the side drain near						
Continued tunnel Wall around	2	10	1½	¾	23	
Total cubic feet					805	805
Burnt Stone slabs aforesaid						
Covering Slab over tunnel	1	32½	9	(½)	146	
Slab over side Cistern	2	6	3	(½)	18	
Total cubic feet					164	164

nting with lime mortar.						
Abutments	2	35½	"	3	213	
er around and including						
face walls in Sides	1	68	"	3	204	
Total	Sqr.				417	4017
ying spoil earth and casting						
as per Earth-work excavation			Cyds		91	
such earth used on road	1	8	4	¼	8	
Total cubic yards					83	83
tunnel no 3 Am main Sewer.						
Earth-work Excavation-						
Cutting and opening road	1	8	3½	2	69	
Abutments foundation	2	8	½	½	6	
Pier	1	8	½	½	3	
Returns	3	⅔	⅔	2½	3	
Total cubic yards					81	81
gh Stone in lime mortar						
Foundation Abutments	2	24½	2	1½	147	
Returns	3	2	2	1½	18	
Face walls	4	24½	1½	1½	22	
Pier	1	24½	2	1½	74	
Cut water	1	1½	2	1½	5	
superstructure Abutments.	2	24	1½	3	216	
Backing to Slab.	2	24	¾	½	18	
Pier	1	24	1½	3	108	
Cut water	1	1½	1½	3	3	
Returns.	3	2	1½	3½	31	
Blocking Course	1	14	1½	1½	32	
ewn for Side drain near Centre of						
Tunnel	2	10	1½	1	30	
Total cubic feet					704	704

Burnt Stone Slabs 12" dressed					
Covering Slab over tunnel.	2	24	4½	½	108
Do for Side					
Cistern near combined tunnel	1	6	8½	½	10
Do Do	1	12	4½	½	27
Total cubic feet					145
Pointing with lime mortar					
Face of abutments and pier	4	24	4	3	288
Cut water	1	2	"	3	6
Do.	1	1½	"	3	4
Returns	3	3½	4	3½	37
Total Sqr:					335
Rough Stone work dry					
Cross wall for Box drain	1	6	2	3	36
Do Do	1	3	2	3	18
Circular revetment for cistern	1	10	1½	1	15
Revetment to Side drain.	1	8	1½	3	36
Total cubic feet					105
Total cubic yards					
Removing the available earth from					
work-spot to out of town					
Earth-work Excavation					
Deduct earth used to road					
Balance in cub. yards					
Tunnel no. 4 A on Mylordeva street					
Earth-work Excavation.					
Cutting road including found					
dation for tunnels.					
For recent Cistern	1	3			
Total cubic					
Rough Stone in					
I					

Brought forward					147	
Toe-wall	4	24½	1½	1½	23	
Pier	1	24½	2	1½	74	
Substructure Abutments.	2	24	1½	3	216	
Backing to Slab.	2	24	¾	½	18	
Pier	1	24	1½	3	108	
Toe-wall near flooring	4	24½	1½	1½	23	
Blocking Course	1	10½	2	1	21	
Total cubic feet					629	629
Cut Stone in lime Mortar						
Parapet wall down Stream Side	1	10½	1½	1	16	
do up Stream Side	1	9½	1½	2	29	
Total cubic feet.					45	45
Cut Stone Slabs dressed						
Covering Slab over Tunnel	2	24	4½	½	108	
do over Cistern	1	7¼	5	½	18	
Total Cubic feet					126	126
Pointing with lime Mortar						
Face of Abutments inside	2	25½	"	3	153	
Pier both Sides	2	25½	"	3	153	
Blocking Course out-Side	1	14½	"	1	15	
Parapet wall both Sides	1	24	"	1	24	
do do	1	22½	"	2	45	
Total Sqr					3.90	8.90
Rough Stone. work dry						
Flooring to Vault	2	7	5/6	½	6	
Foundation for Cistern	1	8⅔	1⅓	⅔	3	
Cistern wall on top Revetment to side	1	5½	½	1	3	
drain	2	2	½	⅔	2	
Total Cubic yards					14	14
Excavating the road	Lump Sum				Rs	3/

Burnt Stone Slabs dressed							
Covering Slab over Tunnels.	2	24	4½	½	108		
Do for Sides.							
Cistern near combined tunnel	1	6	3½	½	10.		
Do Do	1	12	4½	½	27		
Total cubic feet					145	145	
Pointing with lime mortar							
Face of abutments and pier	4	24	"	3	288		
Cut water	1	2	"	3	6		
Do	1	1½	"	3	4		
Return	3	3½	"	3½	37		
Total Sqr.					335	3.35	
Rough Stone Work in							
Cross wall for Box	Drain	1	6	2	3	36	
Do	Do	1	3	2	3	18	
Circular revetment	Cistern	1	10	1½	1	15	
Revetment to Side	Drain.	1	8	1½	3	36	
Total Cubic feet					108		
Total Cubic yards						4	
Removing the available earth from							
work-spot to out of town							
Earth-work Excavation					C yds 81		
Deduct earth used to road					8		
Balance in	Cub. yards					73	
Tunnel No. 4 A on Mylordeva stream							
Earth-work Excavation.							
Cutting road including foundation for tunnel	1	8	2½	3	58		
For front Cistern	1	3	1	1½	8		
Total Cubic yards					66	66	
Rough Stone in lime Mortar.							
Foundation for Abutments	2	24½	2	1½	147		
Carried over					147		

Brought forward					147	
Face-wall	4	24½	1½	1½	294	
Pier.	1	24½	2	1½	74	
Abutments.	2	24	1½	3	216	
Backing to Slab.	2	24	¾	½	18	
Pier	1	24	1½	3	108	
Face-wall near flooring	4	24½	1½	1½	23	
Blocking Course	1	10½	2	1	21	
Total Cubic feet					629	629
Rubble Stone in lime Mortar						
Parapet wall down Stream Side	1	10½	1½	1	16	
do up Stream Side	1	9½	1½	2	29	
Total Cubic feet.					45	45
Dressed Stone Slabs dressed						
Covering Slab over Tunnel	2	24	4½	½	108	
do over Cistern	1	7¼	5	½	18	
Total Cubic feet					126	126
Pointing with lime Mortar						
Face of abutments inside	2	25½	"	3	153	
Pier both sides	2	25½	"	3	153	
Blocking Course out-side	1	14½	"	1	15	
Parapet wall both Sides	1	24	"	1	24	
do do	1	22½	"	2	45	
Total Sqr.					390	390
Rough Stone. work. dry						
Flooring to Vault	2	7	⅚	½	6	
Foundation for Cistern	1	3⅔	1⅓	⅔	3	
Cistern wall on top Revetment Side	1	5½	½	1	3	
drain	2	2	½	⅔	2	
Total Cubic yards					14	14
Excavating the road	Lump Sum				Rs	3/

Guard Stones

Tunnel No 6 A in Mallikarjuna Ducts Stream

Earth-work Excavation					
Cutting road	1	$10\frac{2}{3}$	4	$\frac{5}{6}$	36
Wings side	$1 \times 2\frac{1}{6} \times 4 + 5 \cdot \frac{1}{2} \times 5 \cdot \frac{1}{2} \times \frac{1}{2}$				15
Foundation for abutment	2	$10\frac{5}{12}$	$\frac{2}{3}$	$\frac{1}{2}$	7
Sides of box drain	1	$2\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{2}$	1
Pier with cut-water	1	$9\frac{1}{6}$	$\frac{2}{3}$	$\frac{1}{2}$	3
Retaining wall	2×2	$\frac{5}{6}$	$\frac{1}{2}$	$\frac{1}{2}$	1
For Cistern.	1	$2\frac{1}{3}$	$\frac{5}{6}$	$\frac{1}{2}$	1
Wings	2	$1\frac{1}{2}$	$\frac{2}{3}$	$\frac{1}{2}$	1
Pedestals	2	$\frac{7}{12}$	$\frac{2}{3}$	$\frac{1}{2}$	"
Between wings for flooring	1	$3\frac{2}{3}$	$\frac{1}{2}$	$\frac{1}{2}$	1
For Box drain.	1	$4\frac{2}{3}$	2	$1\frac{1}{2}$	14
Total Cubic yards.					80 80
Rough Stone in lime mortar					
Foundation. abutments	2	$31\frac{1}{4}$	2	$1\frac{1}{2}$	$187\frac{1}{2}$
Side of Box drain	1	7	2	$1\frac{1}{2}$	21
Wings	2	$3\frac{3}{4}$	2	$1\frac{1}{2}$	23
Pier with Cut-water	1	$27\frac{1}{2}$	2	$1\frac{1}{2}$	$82\frac{1}{2}$
Retaining wall	2×2	$2\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{1}{2}$	23
Superstructure. abutments	2	$26\frac{1}{4}$	$1\frac{1}{2}$	3	236
Side of Box drain	1	$10\frac{1}{2}$	$1\frac{1}{2}$	$3\frac{1}{4}$	51
Do. Do	2	3	$1\frac{1}{2}$	$3\frac{1}{8}$	28
Pier with-cut-water.	1	$26\frac{5}{6}$	$1\frac{1}{2}$	3	120
Wings	$2 \times 4 \times \frac{1}{2} \times 3 \times 1\frac{1}{2}$				27
Pedestals	2	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	7
Side of Covering Slab	2	$26\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{2}$	20
Blocking Course	1	9	2	1	18
Total Cubic feet					944 84

ing with lime mortar.						
Face of abutments	2	29½	×	3	175	
Vent of Box drain	2	7½	×	3	45	
with cut-water both sides	1	55½	×	3	166	
Wings	2	4	3 + 1½ / 2		17	
Pedestals.	2	1½	×	1½	4	
ning course out-side.	1	13	×	1	13	
Total Sqr.					420	4.20
ut Stone Slabs dressed.						
Covering Slab over tunnel	2	26½	4½	½	118	
do over Box drain	1	14	4½	½	32	
Total Cubic feet					150	150.
gh Stone dry						
stone wall for box drain	1	3	1½	1½	7	
Filling foundation platform	1	14	6	1	84	
Side walls	2	14	1½	3	126	
Total Cubic feet.					217	
Total Cubic yards						8
oving boulders and rough						
Stone-work	1	4	1	1		
Total Cubic yards						4

Constructing 3½ Rough Stone tunnels

Abstract

	Items of work	Per	Rate	Tunnel no 1 A Quantity	Cost
1	Earth-work Excavation	cyd	" 2 6	84	13
2.	Rough Stone-work dry	cyd	2 8 "	5	13
3	Rough Stone in Mortar	cft	" 4 "	1040	260
4	Rough Stone-work new and old	cyd	" 12 "	20	15
5	Burnt Stone Slabs dressed 6" thick	cft	" 12 "	211	158
6	Burnt Stone in Mortar	cft	" 5 "	35	11 0
7	Pointing with lime Mortar	Sq	2 8 "	4·81	12
8	Guard stones dressed	each	1 8 "	8	8
9	Metalling including lead	Cyd	1 4 "	2	3
10	Dismantling the existing tunnel.	cft	" " 4	864	18
11	Removing the old slabs.	cft	" 1 "	216	14
12	Carrying the available earth near and from Tunnel site to out of Tonga with lead	cyd	" 3 3	84	7
13.	Removing the boulders	cyd	1 " "	"	"
	Total				

Design

17

Tunnel No 2 A		Tunnel No 3 A		Tunnel No 4 A		Tunnel No 5 A		Total		Grand Total Rupees
Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
91	14	87	13	66	10	80	13	402	63	
"	"	4	10	14	35	8	20	31	78	
805	201	704	176	629	157	844	211	4022	1005	
"	"	"	"	"	"	"	"	20	15	
164	123	145	108	126	94	150	113	796	596	
"	"	"	"	45	14	"	"	80	25	
4017	11	3035	8	3090	10	4020	11	20043	52	
"	"	"	"	4	6	"	"	7	11	
"	"	"	"	L S R.	3	"	"	L S R.	6	
"	"	"	"	"	"	"	"	864	18	
"	"	"	"	"	"	"	"	216	14	
"	"	"	"	"	"	"	"	"	"	
83	17	73	15	"	"	"	"	240	49	
"	"	"	"	"	"	"	"	"	"	
"	"	"	"	"	"	4	4	4	4	
	366		330		329		372			1936

(Signed) Harry J Molloy
Executive Engineer,
Kadur Division,
Chikmagalur.

(Signed) B Garudachary
Assistant Engineer
Koppa Range

- ½ I B m main Struct

					18	
rth-work Excavation						2)
Foundation	1	25	6½	5	812	
Total cubic feet					812	
Total cubic yards						30
gh Stone in lime mortar						
Filling foundation.	1	24½	6½	1	159	
Abutments	2	24	1½	2	144	
Backing to Slab.	2	24	¾	½	18	
Blocking Course	2	6	2	1¾	42	
Total cubic feet					363	363
ent Stone in lime mortar						
Parapet walls	2	6	1½	1	18	
Total cubic feet.						18
inting with lime mortar.						
Face of abutments	2	24	a	2	96	
Blocking Course outside.	2	9	a	2	36	
Parapet wall	2	15	a	1	30	
Total Sqrs.					162	1·62
ent Stone slabs dressed						
Covering Slab over tunnels	1	24	4½	½	54	
ping Slab over parapet wall	2	6	1½	½	9	
Total cubic feet					63	63
Rough Stone dry						
ough Stone revetment for sides						
and cross-walls	4	4½	2	4½	162	
Total cubic feet					162	
Total cubic yards						6
k-work filling bte Sides of revetment				Lump Sum	Rs	11
Guard Stones					ons	4

Tunnel No. 2 B in main Street						
Earth-work excavation						
Foundation	1	25	6½	5	812	
Total cubic feet					812	
Total cubic yards						30
Rough Stone in Mortar.						
Filling foundation	1	24½	6½	1	157	
Abutments	2	24	1½	2	144	
Backing to Slab	2	24	¾	½	18	
Blocking Courds	2	6	2	1	24	
Total cubic feet					345	345
Burnt Stone in mortar						
Parapet walls	2	6	1½	1	18	
Total cubic feet						18
Pointing with lime mortar.						
Face of abutments	2	24	×	2	96	
outside of Blocking Course	2	9	×	1	18	
Parapet wall around	2	15	×	1	30	
Total Sqs.					144	1.44
Burnt Stone Slab dressed.						
Covering Slab over tunnel	1	24	4½	½	54	
Coping Slab over parapet walls	2	6	1½	½	9	
Total cubic feet					63	6
Guard Stone					No	4
Rough stone dry						
Cross walls of Cistern.	4	3	1½	3	54	
Total cubic feet					54	
Total cubic yards						2
Filling earth for the back of revetment	Lump sum Rupees					1
Tunnel No. 3 B in Main Street						
Earth-work Excavation						
Foundation	1	25	6½	4	650	
Carried over					650	

Brought forward					550	
Deduct for rock	1	14	6	1	84	
Balance cubic feet					466	
Balance cubic yards						21
Sc- rock as per above deduction in cubic feet					84	
Total cubic yards						3
gh Stone in lime mortar						
Filling foundation	1	24½	6½	1	159	
Abutment	2	24	1½	2	144	
Blocking Course	2	6	2	1½	36	
Total cubic feet					339	339
nt Stone in lime mortar						
Parapet wall	2	6	1½	1	18	
Total cubic feet						18
ishing with lime mortar						
Face of abutments	2	24	"	2	96	
Blocking Course	2	9	"	1½	27	
Parapet wall aboround	2	15	"	1	30	
Total Sqr					153	1.53
nt Stone Slabs dressed						
Covering Slab over tunnel	1	24	4½	½	54	
Coping over parapet wall	2	6	1½	½	9	
Total cubic feet					63	63
Guard Stones					No	4
ugh Stone-work dry						
Revetting Sides.	2	41½	1½	3	41	
Revetting cross-walls	3	3	1½	3	40	
Total cubic feet					81	
Total cubic yards						3
ing earth rear of rough Stone- wall	Lump Sum					

Culvert No 4 B on main Street

Earth-work Excavation						
Foundation	1	25	6½	5	812	
Total cubic feet					812	
Total cubic yards						30
Rough Stone in lime mortar						
Filling foundation	1	24½	6½	1	159	
Abutments.	2	24	1½	2	144	
Backing to Slab.	2	24	¾	½	18	
Do	1	6	2	1	12	
Total cubic feet					333	333
Burnt Stone in lime mortar.						
Parapet walls	2	6	1½	1	18	
Total cubic feet						18
Pointing with lime mortar						
Face of abutments	2	24	"	2	96	
Blocking course	1	13	"	1	13	
Sides of Blocking course	1	9	"	1	9	
Abroind parapet	1	15	"	1	15	
Do.	1	23	"	1	23	
Total Sqr.					156	1.56
Burnt Stone Slabs dressed						
Covering Slab over Tunnel	1	24	4½	½	54	
Coping Slab over parapet wall	1	6	1½	½	4	
Do Do.	1	10	1½	½	8	
Total cubic feet					66	66
Guard Stones					One	4
Rough Stone-work dry						
Cross-wall of Side drains	4	4½	1½	4½	121	
Side-walls of Side-drains	2	3	1½	4½	40	
Total cubic feet					161	
Total cubic yards						

Filling earth on Side of Revetments &c

No. 5 Bridge Across Stream

Earth-work excavation

Foundation	1	25	6½	5	812	
Total cubic feet					812	
Total cubic yards						30
Stone in lime mortar						
Filling foundation	1	24½	6½	1	159	
Abutments	2	24	1½	2	144	
Backing to Slab	2	24	¾	½	18	
Blocking Course	2	6	2	1	24	
Total cubic feet					345	345
Stone in lime mortar						
Parapet walls	2	6	1½	1	18	
Total cubic feet						18
Stone Slabs dressed						
Coursing Slab over tunnel	1	24	4½	½	54	
Coping Slab over parapet wall	2	6	1½	½	9	
Total cubic feet					63	63
Pointing with lime Mortar.						
Face of abutments	2	24	"	2	96	
Blocking course outside	2	10	"	1	20	
Parapet wall	2	15	"	1	30	
Total Sqr					146	1.46
Guard Stone					no	4
Rough Stone dry						
Box drain	4	4½	1½	4	108	
Side wall.	1	3	1½	4	18	
Total cubic feet					126	
Total cubic yards						5
Earth on back of rough-stone work	Lump Sum Rupees 7					

Tunnel no 6 B m Mylavaram dewa Street

Earth-work Excavation

For foundation	1	9	3	1½	40	
do.	2	9	3	1½	4	
Total cubic yards					0444	44

Rough Stone in Mortar.

Foundation abutments	2	24½	2	1	98	
Returns	2	2	2	1	8	
Face-wall	2	2½	1½	1	7	
Superstructure. abutments.	2	24	1½	2	144	
Backing to Slab	2	24	¾	½	18	
Returns.	2	2	1½	2½	15	
Total cubic feet					290	290

Pointing with lime Mortar.

Face of abutments	1	24	"	2	48.	
Total Sqr						048

Burnt Stone Slabs dressed

Covering Slab over tunnel	1	24	4½	½	54	
Total Cubic feet						54
Removing the available earth as per excavation					44	
deduct for earth used for road	1	8	1½	¼	3	
Balance in cubic yards						4

Tunnel no 7 B m Mallikarjuna dewa Street

Earth-work Excavation

For foundation	1	9	2⅔	2	48	
do	2	1	1	2	4	
Total Cubic yards					52	
deduct Boulders removed Cubic yards					20	
Balance in Cubic yards						

Removing Boulders as per deduction Cubic yards

...ing the ...ovable earth						
out of Town	cubic	yards				29
...g stone in Mortar.						
Foundation.	2	5 3/4	2	1	23	
Do	1	22 1/2	2	1	45	
Retaining wall	2	2 1/2	1 1/2	1	7	
...structure Abutments.	1	22	1 1/2	2	66	
do	2	5 3/4	1 1/2	2	35	
Total cubic feet					176	176
...ing with Lime Mortar.						
Abutments	1	22	"	2	44	
Do.	2	5 3/4	"	2	23	
Total Qty					67	67
...t Stone Slab dressed.						
Covering Slab overhand	1	22	4 1/2	1/2	50	
Total cubic feet						50

Abstract for constructing Rough stone line.

Items of work	Per	Rate	
Earth work Excavation	cyds	-	2
Rough stone work dry	cyds	2	8
Rough stone in mortar	cft	-	4
Burnt-stone Shales dressed 6"	cft	-	12
Bassal stone in mortar	cft	-	5
Pointing with lime mortar	sqrs	2	8
Guard stones	each	1	8
Removing available earth to out of Town	cyds	-	3
Earth work excavation for box drains	l.d	-	
Excavation soft rock	l.d.	-	
Removing boulders	cyds		4
Total			

24

enclr 3'x2' No 7. B Design.

ne B	Tunnel No. 2B		Tunnel No. 3B		Tunnel No. 4B		Tunnel No. 5B		Tunnel No. 6B		Tunnel No. 7B		Total		Type and Total Lengths
Cost	Q	Cost	Q	Cost	Q	Cost	Q	Cost	Q	Cost	Q	Cost	Q	Cost	
5	30	5	21	3	30	5	30	5	44	7	32	5	217	35	
15	2	5	3	8	6	15	5	13	-	-	5	13	27	69	
91	345	86	339	85	338	83	345	86	290	73	176	44	2191	548	
47	63	47	63	47	66	50	63	47	54	41	60	38	412	317	
6	18	6	18	6	18	6	18	6	-	-	-		90	30	
4	1·44	4	1·53	4	1·56	4	1·46	4	·48	1	67	1	8·76	22	
6	4	6	4	6	4	6	4	6	-	-	-		20	30	
	-	-	-	-	-		-		41	8	29	6	70	14	
1	-	1	-	1		1		5				1		10	
			3	1										1	
	-	-	-	-	-	-	-	-	-	-	20	5	20	5	
175		160		161		170		172		130		113			1081

2nd/B Gaundakar,
Assistant Engineer.
Kaptsa Range

1st/ Harry J. Malloy
Executive Engineer,
Kadur Division
Chikmagalur

Copy

Executive Engineer,
Kadur Division
Chikmagalur

Rough Stone tunnel 1 vent 3' x 3'

long, on Haribar Dmas Street Tunnel Sta 0 to

Earthwork Excavation

Foundation	1	18½/3	3.	1½	34	
net for old Tunnel					9	
Balance in Cyds					25	25
Rough Stone in Mortar						
Filling foundation	1	18½	6½	1½	180	
Abutments	2	18	1½	3	162	
Sides of covering Slab	2	18	¾	½	14	
Total Cubic feet					356	356
Dressed Stone Slabs						
Covering Slab on Tunnel	1	18	4½	½	41	
Total cubic feet						41
Pointing with Lime Mortar						
Abutments with Sides	2	21		3	126	
Total Square						126
Rough Stone dry						
Cross wall of Side dam	2	3	2	4½	54	
Total Cyds						2 54
Mantling Old Tunnel						
Side walls	2	21	1½	3	189	
Covering Slab	1	21	4½	½	47	
Total Cft					236	236
Filling earth in back of						
revetment		Lump Sum Rs				2/-

Tunnel No 2 C on Haribar Dmas Street

Earthwork Excavation

For foundation	1	19 18½	6½	5½	679	
Total Cyds						25

Rough Stone in Lime Mortar						
Filling foundation	1	18½	6½	1½	180	
Abutments	2	18	1½	3	162	
Backing to Slab	2	18	¾	½	13	
Blocking Course	2	6	2	1¼	30	
Parapet wall all round	1	14	1½	1½	32	
Total Cubic feet.					417	41
Pointing with lime Mortar						
Face of Abutments	2	18	"	3	108	
Blocking Course	2	10	"	1¼	25	
Parapet wall all round	1	33	"	1½	50.	
Total Squares.					183	1·8
Burnt Stone Slabs Dressed						
Covering Slab on the Tunnel	1	18	4½	½	41	
over Side drain Coping Slab	2	4½	1½	½	6	
Coping Slab over Parapet wall	1	14	1½	½	11	
Total Cubic feet					58	58
Guard Stones					Nil	2
Rough Stone Work dry						
Cross wall of Culvert	2	4	2	4½	72	
Sides of — do —	1	3	2	2	12	
Total cyds					84	3.
Filling Earth in back						
of Revetment		Lump Sum				1/-

Tunnel No 3 Over Khandala [illegible] Station

Culvert No 3. On Hanchandan Dam						
Earthwork Excavation						
For foundation	1	19	6½	5¾	710	
Total Cyds						26
Rough Stone in Lime Mortar						
Filling Foundation	1	18½	6½	1½	180	
Abutments	2	18	1½	3	162	
Backing to Slab	2	18	¾	½	13	
Blocking Course	2	6	2	1½	36	
Total Cubic feet.					391	391
Pointing with Lime Mortar						
Face of Abutments	2	18	"	3	108	
Blocking Course ontop	2	10	"	1½	30	
Total Squares.					138	1.38.
Coment Stone Slabs dressed						
Covering Slab over Culvert	1	18	4½	½	41	
Total Cft					41	41
Rough Stone dry						
Sides of side drain	2	4½	2	4½	81	
Total Cyds						3
Filling Earth on back of Revetment	Sum	Sum				1/-
Culvert No 4. On Hanchandan Dam Rs.						
Earthwork Excavation						
For foundation	1	19	6½	5½	679	
Total Cyds						25

Rough Stone in lime mortar						
Filling foundation	1	18½	6½	1½	180	
Abutments	2	18	1¼	3	162	
Sides of covering slab	2	18	¾	½	13	
Blocking Course	2	6	2	1½	36	
Total Cubic feet					391	391
Burnt Stone in lime mortar						
Parapet wall	1	6	1½	1	9	
Total Cft.						9
Pointing with Chinam mortar						
Face of Abutments	2	18	4	3	108	
Blocking Course.	2	10	"	1½	30	
Parapet wall both sides	1	15	"	1	15	
Total Squares					153	1
Guard Stones					No.	2
Rough Stone dry						
Side of Box drain	2	4½	2	4½	81	
Total Cyds						3
Burnt Stone Slab dressed						
Covering Slab over Tunnel	1	18	4½	½	41	
Coping Slab over parapet wall	1	6	1½	½	5	
Total Cubic feet					46	46
Filling earth in back						
of revetment	Lump Sum			Rs		1/-
Tunnel 10 5 C m	Vacant					
Earth Work Excavation						
for foundation	1	6⅔	2⅓	1⅔	29	
cutting high ground	1	10	1	2⅓	23	
Total Cyds.					52	

k Stone in mortar					30	
Filling foundation	1	18½	6½	1½	180	
Abutments	2	18	1½	3	162	
Sides of covering slab	2	18	¾	½	14	
Blocking course	2	6	2	1½	36	
Total Cubic feet.					392	392
ut Stone in mortar						
Parapet wall	2	6	1½	1	18	
Total Cft.						18
-ing with Lime mortar						
Abutments	2	21	"	3	126	
Blocking course ashlar	2	10	"	1½	30	
Parapet wall both sides	2	15	"	1	30	
Total Squares					186	1.86
ut Stone Slabs dressed						
Covering Slab over tunnel	1	18	4½	½	41	
Coping on parapet walls	2	6	1½	½	9	
Total Cft.					50	50
and Stones					Sq.	4
rgh Stone dry						
Cross walls of box drain	3	4	2	4	96	
——— Do ———	1	3	2	4	24	
Revetment	1	9	2	4	72	
Extension of Parapet walls	2	4½	1½	3½	46	
Total Cyds	-	-		-	238	9

Filling earth in back of revetment

Tunnel No 6 C in Hamilton Brae Sheet 1

	No.	Length	Breadth	Depth	Quantity	Remarks
Earthwork Excavation						
For foundation	1	19	6½	5½	679	
Total Cy^ds.						25
Rough Stone in Lime Mortar						
Filling foundation	1	18½	6½	1½	180	
Superstructure Abutments	2	18	1½	3	162	
Backing to Slab	2	18	¾	½	13	
Blocking Course	2	6	2	¾	18	
Total C^ft.					373	373.
Bant Stone in Mortar						
Parapet walls	2	6	1½	1	18	
Total C^ft.						18
Bant Stone Slabs dressed						
Coping Slabs over tunnel	1	18	4½	½	40	
Coping Slabs on parapet walls	1	6	1½	½	5	
Total C^ft.					45	45
Pointing with Lime Mortar.						
Face of abutments	2	21	"	3	126	
Blocking Course	2	10	"	1¾	35	
Parapet walls both sides	1	15	"	1½	15	
Total Superc.					176	176
Guard Stones					No.	2

...gh Stone dry.						
...Cross walls of Abutments	4	4½	2	3	108	
Side walls	2	3	2	4½	54	
Total Cyds.					162	6.
Tunnel No. 7 C... in Arkal Sheet						
...twork Excavation						
For foundation	1	6⅔	2½	4½	25	
"	4	⅔	5/6	1½	3.	
Total Cyds.					28	28
...dge side removing						
Excavation for foundation	1	8½	2½	1½	32	
...used earth ... Tunnel			Lump Sum		3	
Total Cyds						35
...gh Stone in Mortar						
Filling foundation for Abutments	2	24½	2	1	98	
Wings	4	2	2	1	16	
Retaining Wall	2	2½	1½	1	7	
...ecoating						
Abutments	2	24½	1½	3	220	
Wings	4	2	1½	3½	42	
Backing to Slab	2	24	¾	½	18	
Blocking Corner	2	6	2	1	24	
Total Cft.					425	425
...ut Stone in Mortar						

Burnt Stone in mortar						
Parapet walls	2	6	1½	1	18	
~~Covering Slab over tunnel~~	~~1~~	~~24½~~	~~4½~~	~~½~~	~~55~~	
Total Cft.						18
Pointing with lime mortar						
Face of Abutments.	2	28	-	3	168	
Blocking Course -	2	10	-	1	20	
Parapet wall	2	15	-	1	30	
Total Squares					218	2·18
Burnt Stone Slabs dressed						
Covering Slab over tunnel	1	24½	4½	½	55	
Coping over parapet wall	2	6	1½	½	9	
Total Cft.					64	64
Guard Stones					Nos	4
Rough Stone dry						
Sides of culvert	1	12	2	4	96	
Total Cyds.						3
Filling Earth on back						
of Rough Stone work	Lump Sum Rs					1/-
Tunnel No 8 C	in Aukal sheet					
Earthwork Excavation						
Foundation	1	8	2⅔	1½	28	
Total Cyds						28
Using the earth available						
over the tunnel					Cyds	23
Rough Stone masonry.						
Foundation	2	22	2	1½	132	
Returns	4	2	2	1½	24	
Carried over					156	

Brought forward.	53				456	
					198	
Retaining Abutments.	2	22	1½	3	297	
					42	
Returns	4	2	1½	3	198	
Backing to Slab	2	22	¾	½	16	
Blocking Course	2	6	2	1	24	
Total Cft					436	436
Rubble Stone in lime mortar						
Parapet walls	2	6	1½	1	18	
Total Cft						18
Pointing with lime mortar						
Abutments	2	24	"	3	144	
Blocking Course	2	10	"	1	20	
Parapet wall both sides	2	15	"	1	30	
Total Squares					194	1.94
Cut Stone Slabs dressed						
Covering Slabs over tunnel	1	22	4½	½	50	
Coping Slabs over parapets	2	6	1½	½	9	
Total Cft					59	59.
and Stones					24	4
Rough Stone work dry						
Pile off box drain	1	4	2	4½	36	
— do —	1	3	2	4½	27	
Total Cyds.					63	2
Filling earth on back of						
revetment						
Embanking Slopes and Surfaces	1	6	4	4½	2	12 cyds

Lum Seen Po

Rough Stone in mortar.						
Filling foundation	1	18½	6½	1½	180	
Abutments	1	18	1½	3	81	
Backing to Slab	2	18	¾	½	13	
Blocking Course	2	6	1½	1	18	
Total Cft.					298	298.
Burnt Stone in lime mortar						
Parapet walls						
~~Face of Abutments~~	2	6	1½	1	18	
Total Cft.						18.
Pointing with lime mortar						
Face of Abutments	2	18	"	3	108.	
Blocking Course	2	10	"	1	20	
Parapet wall	2	15	"	1	30	
Total Sqrs.					158	158
Burnt Stone Slab dressed						
Covering Slab over tunnel	1	18	4½	½	41	
Coping Slab on parapet walls	2	6	1½	1½	9	
Total Cft					50	50
Guard Stones					Nos.	4
Rough Stonework dry.						
Cross walls.	4	4½	2	4½	162	
Side walls	2	3	2	4½	54	
Total Cubs					216	8
Filling earth on back of rough Stonework	Lump Sum				Rs	

- Constructing A/C design

W.S.

Items of Work	Tunnel No 8 C		Tunnel No 9 C		Tunnel No 10 C		Grand Total Rupees
	Q	C.	Q	C	Q	C	
Tunnel Excavation	28	4	27	4	26	4	44
Rubble Stone work dry	2	5	13	33	8	20	133
Do — in mortar	436 272	109 68	272 298	68	298	75	938
Rubble Stone Slabs dressed	59	44	173	130	50	38	471
Rubble Stone in mortar	18	6	48	15	18	6	48
Pointing with lime mortar	194	5	285	7	158	4	44
and Stones	4	6	4	6	4	6	39
Excavation of soft rock	"	"	"	"	"	"	6
Dismantling Old Tunnel	"	"	"	"	"	"	7.
Felling undermining Lead	2	3	"	"	"	"	3
Carrying available earth	29	6	27	6	"	"	12
Tunnel for boy drain	"	1	"	1	"	1	4
Do — Soft rock	"	"	"	"	"	"	7
Do — Hard rock	"	"	7	7	"	"	7
Total		189	-	277		154	1763

W. Harry J. Molloy
Executive Engineer
Kadur Division
Chikmagalur

Rough Stone in mortar.						
Filling foundation	1	18½	6½	1½	180	
Abutments	1	18	1½	3	81	
Backing to Slab	2	18	¾	½	13	
Blocking Course	2	6	1½	1	18	
Total Cft.					298	298
Burnt Stone in lime mortar.						
Parapet walls Face of Abutments	2	6	1½	1	18	
Total Cft.						18.
Pointing with lime mortar						
Face of abutments	2	18	"	3	108.	
Blocking Course	2	10	"	1	20.	
Parapet wall	2	15	"	1	30	
Total Squares.					158	158
Burnt Stone Slab dressed.						
Covering Slab over tunnel	1	18	4½	½	41	
Coping Slab over parapet walls	2	6	1½	1½	9.	
Total Cft					50	50
Wing and Stones					2 No.	4
Rough Stonework dry.						
Cross walls.	4	4½	2	4½	162	
Side walls	2	3	2	4½	54	
Total Cubs					216	8
Filling earth on back of rough Stonework	Lump Sum				Rs	

Rough Stone in Mortar | 36

-Constructing Rough Stone Tunnel &c.

A6

Items of Work	Per	Rate			Tunnel No 1 C		Tunnel No 2 C	
					Q	C.	Q	C
Earthwork Excavation	cyd	"	2	6	25	4	25	4
Rough Stone work dry	cyd	2	8	"	2	5	3	8
Do — in mortar	cft	"	4	"	356	89	417	104
Burnt Stone Slabs dressed	"	"	12	"	41	31	58	44
Burnt Stone in mortar	"	"	5	"	"	"	"	"
Pointing with lime mortar	Sqr	2	8	"	1·26	3	183	4
Guard Stones	each	1	6	"	"	"	2	3
Excavation of soft rock	cyd	"	"	"	"	2	"	1
Dismantling Old tunnel	cft	"	"	6	236	7	"	"
Installing including lead	cyd	1	4	"	"	"	"	"
Carrying available earth	cyd	"	3	3	"	"	"	"
Earthwork for box drain	cyd		Same		Same		"	"
Do — Soft rock	"	"	3	3	"	"	"	"
Do — Hard rock	"	1	"	"	"	"	"	"
Total					141	"	168	"

3'x3' and 18' long - No 10 C design

38

Tunnel No 4 C		Tunnel No 5 C.		Tunnel No 6 C		Tunnel No 7 C		Tunnel No 8 C		Tunnel No 9 C		Tunnel No 10 C		Grand Total Rupees
Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	
25	4	52	8	25	4	28	4	28	4	27	4	26	4	44
3	8	9	23	6	15	3	8	2	5	13	33	8	20	133
392	98	392	23 98	373 426	93 106	425 436	106 109	436 272	109 68	272 298	68	298	75	938
46	34	50	37	45	34	64	48	59	44	173	130	50	38	471
9	3	18	6	18	6	18	6	18	6	48	15	18	6	48
153	4	186	6	176	4	218	5	194	5	285	7	158	4	44
2	3	4	6	2	3	4	6	4	6	4	6	4	6	39
"	1	"	1	"	"	"	"	"	"	"	"	"	"	6
"	"	"	"	"	"	"	"	"	"	"	"	"	"	7.
"	"	"	"	"	"	"	"	2	3	"	"	"	"	3
"	"	"	"	"	"	"	"	29	6	27	6	"	"	12
"	"	"	"	"	"	"	1	"	1	"	1	"	1	4
"	"	"	"	"	"	35	7	"	"	"	"	"	"	7
"	"	"	"	"	"	"	"	"	"	7	7	"	"	7
633	-	784	-	659	-	791			189	-	277		154	1763

Adj- B Gurudachar
Assistant Engineer
Kolar Range

Adj- Harry J Molloy
Executive Engineer
Kadur Division
Chikmagalur

Tunnel No 1 B	38					
Masonry Excavation					34	
For foundation	1	5½	2½	1½	21	
Total Cyds						21
Rubble Stone in lime mortar						
Foundation filling	1	15½	6½	1	101	
Abutments	2	15	1½	2	90	
Sides of covering Slab	2	15	¾	½	11	
Retaining abutments	2	15	1½	1	45	
Total Cft.					247	247
Pointing with lime mortar						
Abutments with sides	2	18	"	2	72	
Do —	2	18	"	1	36	
Blocking Corner	2	10	"	1	20	
Total Sqrs					128	128
Rubble Stone Slabs dressed						
Covering Slab over tunnel	1	15	4½	½	34	
Total Cft.						34

Providing Rough Stone 3' Tunnel of 1 mt 3'x2'
15 ft long Nos. & design
Abstract

Items of Work	Per	Rate	Quantity	Cost	Total
Masonry Excavation	cft	" 2 6	21	3	
Stone in Mortar	cft	" 4 "	247	62	
Lining with mortar	Sft	2 8 "	128	3	
Stone Slabs dressed 6"	cft	" 12 "	34	26	
moving and refixing the old Slab.	Lum Sum		Rs	2	
Total Rupees					96.

Sd/- B Garudachar
Assistant Engineer
Koppa Range

Sd/- Harry J Mollay
Executive Engineer
Kadur Division
Chikmagalur

Tunnel No 1 E Gunnar Street						
Earthwork Excavation						
For foundation	1	16	6½	5¾	598	
Total Cyds						22
Rough Stone in mortar						
Filling foundation						
Abutments	1	15½	6½	1½	187	
—do—	2	15	1½	3	135	
Backing to Slab	2	15	¾	½	11	
Total Cft.					297	29
Pointing with lime mortar						
Face of abutments	2	15	-	3	90	
Total Squares						9
Burnt Stone Slab dressed						
Covering Slab over tunnel	1	15	4½	4½	25	
Total Cft.						25
Earthwork Excavation and removing the same and						
to out of town.						
For check drain	1	28	1½	1½	56	
Total Cyds						21
Tunnel No 2 E on Gunnar Street						
Earthwork Excavation						
For foundation	1	3	3	1	9	
—do—	2	3	1½	½	1	
Total Cyds	1					
Rough Stone in Mortar						

k Stone in Mortar						
undation Abutments	2	9½	2	1½	57	
perstructure —do —	2	9	1½	3	81	
acking to Slab	2	9	¾	½	7	
Blocking Coping —	2	6	2	1	24	
Total Cft					169	169
ing with Lime Mortar						
Face of Abutments	2	9	"	3	54	
Blocking Coping —	2	10	"	1	20	
Total Squa.		—			74	74
ut Stone Slab dressed						
Covering Slab over Tunnel	1	× 9 ×	4½	× ½	20	
Total Cft						20
moving the available						
ith to out of town	Lump Sum			Cyds	-	10
Tunnel. 1 2 3 &		on Cross		Road.		
llwork Excavation						
For foundation	1	5⅓	2½	1	13	
Total Cyds						13
ugh Stone in Lime Mortar						
Foundation Abutments	1	15	6½	1½	157	
Superstructure —do —	2	15	1½	3	135	
Back to Slab	2	15	¾	½	11	
Total Cft.					297	297
ut Stone Slab dressed						

42

Burnt Stone Stile dressed						
Coursing Stile						
Over Terminal	1	15	4½	½	34	
Total Cft						34
Pointing with Lime Mortar						
Abutments	2	18		3	108	
Total Square						108

Constructing Rough Stone Tunnel &

Items of work.	Per	Rate		
Earthwork Excavation.	cyd	a	2	6
Rough Stone work dry.	"	2	8	"
Rough Stone in mortar	cft	4	4	"
Burnt Stone Slabs dressed	"	"	12	"
Burnt Stone in mortar	"	"	"	1
Pointing with lime mortar	Sqare	2	8	"
Removing available earth				
to out of town	cyd	"	3	3
Check drain Excavation	"	"	3	"
Total Rupees				

'3'x3' and 15ft long No 3 E design. 1/1/64

nel E	Tunnel No 2 E		Tunnel No 3E		Total		Grand Total Rupees-
cost	Q	Cost	Q	cost	Q	cost	
3	10	2	13	2	45	7	
"	"	"	"	"	"	"	
74	169	42	297	74	763	190	
19	20	15	34	25	79	59	
"	"	"	"	"	"	"	
2	74	2	108	3	272	7	
"	10	2	"	"	10	2.	
11	"	"	"	"	56	11	
109	"	63	"	104	"		276

Sd/- B Gandaeker
Assistant Engineer
Koipa Range

Sdf Harry J Molloy
Executive Engineer
Roads Division
Tahitian Islands

Arched Culvert No 1 E on Main Street

Culvert Excavation

Opening Road	1	9 ×	$\frac{4\frac{1}{3}+6}{2}$	× 5	233
Do — Upstream Side	1 × 4 ×	$\frac{4\frac{1}{3}+6}{2}$	× 4⅓		89
Do — down Stream Side	1 × 4⅓ ×	$\frac{4\frac{1}{3}+8}{2}$	× 5		133
— Do —	1 × 3⅓ × 4	$\frac{2}{3}$ ×	$\frac{5+3}{2}$		62
Foundation Abutments	2	9⅓	5/6	1	15
Counterforts	4	7/6	⅔	1	2
Wings	4	2 7/6	$\frac{1+\frac{2}{3}}{2}$	1	9
Pedestal	4	⅔	⅔	1	2
Apron	1	9 4/6	1 5/6	½	8
between Wings	1	3⅓	$\frac{1\frac{5}{6}+4\frac{5}{6}}{2}$	$\frac{1}{2}$	5
Total Cyds	—				558
Deduct the existing portion					62
					496
Side of the wing in down Stream Side	2	2	7⅔	$\frac{1\frac{1}{2}}{2}$	23
Side	1	5	7⅔	⅔	26
Grand Total					545 546

Rubble Stone in Mortar

Foundation Abutments	2	27½	2½	3	413
Counterforts	4	2½	2	3	60
Wings	4	8½	$\frac{3+2}{2}$	3	255
Pedestals	4	2	2	3	48
Superstructure Abutments	2	27	2	8	864
Counterforts	4	2	2	8	128
Wings	4 × 9 ×	$\frac{2+1\frac{1}{2}}{2}$	×	$\frac{8+3}{2}$	347
Pedestals	4	1½	1½	3	27
Face Walls	2	14	2	6½	364
Carried over					

Brought forward						
Counterforts	4	2	2	½	8	
Blocking Course	2	14	2	¾	42	
"	2	14	$\frac{½+¼}{2}$	¾	8	
Parapets	2	14	1½	1¼	52	
Total					2615	
Deduct arched portion	2×	$\frac{9^2 \times .7854}{2}$		×2	127	
Balance in Cft					2488	2488
Burnt Stone Slab dressed.						
Over wing wall	4	10	1½	6"	30	
P. Estals	2	2	2	4½"	3	
	2	2	2	5"	4	
Under Springing Arch	2	28	2½	6"	70	
Over parapets	2	14	1¾	3"	12	
Retaining Slab	1	11	1½	6"	8	
	1	14½	1½	6"	11	
Pier Slab	6	1½	2½	6"	11	
Total Cft					149	149
Pointing with Lime Mortar						
Abutments	2	27	"	8	432	
Do — Faces	4	$\frac{40}{2}$	"	8	16	
Wings	4	9½	"	$\frac{8+3}{2}$	209	
Pedestals.	4	3	"	3	36	
Face walls.	2	14	"	6½	182	
Parapet	2	14	"	1½	42	
"	4	1½	"	1½	9	
Total					926	

Brought forward &c.					926.	
Pr c/f Semicircular facing						
Out fenton	2×2²÷2				64	
Balance ca Squares						862
Inverted Brick in mortar						
Arch work	1×27×7½×3·14÷16×1½÷2				64	
Total Cft.						478.
Hardening with lime mortar						
Intrados of Arch	1×27×6×3·14÷6×1÷2				254	
Face of Arch	2×1½×7½×3·14÷6÷2				35	
Total Squares					289	289
Hollowing and Grovelling						
over arched tunnel	1×5×7⅔×½				3	
Total Cyds						3
Excavation of Roadway &c						
removing old Logs.					Rft.	19
Rough Stone work dry						
Flooring of tunnel	1×27×5½×1				168	
Apron down ch Stream Side	2	10½	10½	1	221	
Total Cyds					369	14
Dismantling old tunnel portion	1	62	6	4½	1674	
Deduct for tunnel portion	1	62	3	3	558	
Balance ca Cft.					1116	1116
Rough Stone work with						
Old & new Stones.						
Revetment & tenacen	4×30×3+2÷2			14+8÷2	3300	
Running revetment fall in body of Walls	4	10	2	6	480.	
Total Cyds					3780	140

Rough Stonework in new Foundations for Steps and Platform	1	20	10	2/3	133	
Total Cyds.						5
Removing boulders & Earthwork Excavating foundation and filling the same by direction of Resident Engineer when Stones on hand raising to Ground Level.					Cyds	28.
					Sum Sum Rupees	657-
Ground Stones					Sq.	4.

Contracting Arched Culvert No 1 F design

Abstract

Items of Work	Rs	Rate	Quantity	Cost	Total.
Earthwork Excavation	Cyd	" 2 6	545	85	
Burnt Stone in lime Mortar	Cft	" 4 "	2488	622	
Burnt Stone Slab dressed	Cft	" 12 "	149	112	
Pointing with lime Mortar	Sqm	2 8 "	862	22	
Burnt Brick in lime Mortar, Archwork	Cft	" 8 "	478	239	
Plastering with lime Mortar	Sqm	5 " "	2·89	14	
Metalling the Road	Cyd	1 4 "	3	4	
Formation of Road etc-	Sqyd	" 1 "	19	1	
Rough Stone work dry	Cyd	2 8 "	14	35	
Dismantling old Culvert	Cft-	" - 6	1116	35	
Rough Stone work new Stone-	Cyd	1 8 "	140	210	
Rough Stone work old	"	" 12 "	5	4	
Removing boulders etc	Cyd	" 4 "	28	7	
Excavation foundation and filling the Same by the side of the revetment where scoured out and raising to the Ground P.T.O					

Ground level Guard Stones	49	Lacs	Sum	Rupees	15	75
	each	1	8	4	6	
Total Rupees					1411	1411

Sdf- B Gerrudacher
Assistant Engineer
Koppa Range.

Sdf Harry J Hobbs

Charges.

Items	Cost	Total
Pay of temporary Mestry employed on work	162.	
Establishment charge as per new circular order	1969	
Tools and plant	56	
Total Rupees		2187

Sdf. B Garudachar.
Assistant Engineer
Koppa Range

Sdf. Harry J Molloy
Executive Engineer
Kadur Division
Chikmagalur

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Abstract

Sub Heads	Amount	Total
Miscellaneous work such as opening out side drains to main drain, minor roads opening out roads widening revetting as per Contract	4526	
Constructing dressed stone tunnel No 1 of 3'x3' No 1 A 2 ring	1936	
do — do — do — 7 of 3'x3'	1081	
do — do — do — 5 of 3'x3' 15 long No 2	1763	
do — do — one ring of 3'x3' 15 long No 3	96	
do — do — one ring of 3'x3' 15 long No 3 of 6 rings	276	
Constructing Arched Tunnel No 1 F. 2 rings	1411	
Miscellaneous charges such as Temporary Masonry, Establishment	162	
Charges at 17½ per cent	1864	
Tools and Plant	53	
Total		13168

Copy

Executive Engineer,
Kadur Division,
Chikmagalur.

Sd/ B Gandachar
Assistant Engineer
Koppa Range

Sd/ Harry J. Molloy
Executive Engineer
Kadur Division
Chikmagalur

53

GRS 26]

File No 132/08
Serial No 4

Enquiry No. of letter replied to 4102

Encl

No 6137
ml 132-08
Dt 31.12.08

General and Revenue Secretariat
(ml)
, the 190

To
The Dist Engineer Imuafy.
Through the Depty Commr,
Kadur District

Date of issue 31.12.08

Signed by MrKM.W

In cont of G.O. No 692-7/ml 279-07-78 15.8.08, has the honor to forward herewith a copy of the revised estimate of the probable cost of constructing storm water drains and other sanitary improvements to the town of Shimoga for record in his office

By Order
Jdll
for Secy
31/12

SUBJECT

Copied one more